

## CLAIMS

I claim:

1 1. A system for marking a digital recording, wherein the digital  
2 recording includes a plurality of tracks, the system comprising:

3 a mechanism for dividing the digital recording into a  
4 plurality of first sections interleaved with a plurality of  
5 second sections;

6 a mechanism for calculating an identifier as a function of  
7 data contained in each of the plurality of first sections; and

8 a watermarking mechanism for watermarking each of the  
9 plurality of second sections with information related to the  
10 identifier.

1 2. The system of claim 1, wherein the each of the plurality of  
2 first sections are interleaved in an alternating manner with  
3 each of the plurality of second sections.

1 3. The system of claim 1, further comprising a splitting  
2 mechanism for splitting the identifier into  $m$  parts such that  
3 each of the  $m$  parts comprises information related to the  
4 identifier.

1 4. The system of claim 3, wherein a set of m second sections  
2 form a group, and each second section within the group receives  
3 a unique one of the m parts of the identifier.

1 5. The system of claim 1, wherein the identifier is calculated  
2 as a hash of the data contained in the plurality of first  
3 sections.

1 6. The system of claim 1, wherein the digital recording  
2 includes a music recording, and the plurality of tracks include  
3 individual songs.

1 7. The system of claim 1, wherein a length of each section is  
2 less than a length of each track, and the number of sections is  
3 greater than the number of tracks.

1 8. A system for verifying a digital recording, comprising:

2 a mechanism for reading a plurality of first sections from  
3 the digital recording and calculating a first verification  
4 identifier from data contained in the plurality of first  
5 sections;

6 a mechanism for reading watermarks from each of a plurality  
7 of second sections from the digital recording;

8 a mechanism for determining a second verification  
9 identifier from at least one of the watermarks; and

10 a mechanism for comparing the first verification identifier  
11 and the second verification identifier.

1 9. The system of claim 8, wherein the second verification  
2 identifier is determined by coalescing a set of m watermarks  
3 read from the digital recording.

1 10. The system of claim 8, wherein the first verification  
2 identifier is calculated as a hash of the plurality of first  
3 sections.

1 11. The system of claim 8, wherein the plurality of first  
2 sections and plurality of second sections are interleaved in an  
3 alternating manner.

1 12. The system of claim 8, further comprising a mechanism for  
2 terminating a process when the first verification identifier and  
3 the second verification identifier are unequal.

1 13. A program product stored on a recordable media for marking  
2 a digital recording having a plurality of tracks that, when  
3 executed, comprises:

4 means for dividing the digital recording into a plurality  
5 of first sections interleaved with a plurality of second  
6 sections;

7 means for calculating an identifier as a function of data  
8 contained in each of the plurality of first sections; and

9 means for watermarking each of the plurality of second  
10 sections with information related to the identifier.

1 14. The program product of claim 13, further comprising means  
2 for splitting the identifier into  $m$  parts such that each of the  
3  $m$  parts comprises information related to the identifier.

1 15. The program product of claim 14, wherein a set of  $m$  second  
2 sections form a group, and each second section within the group  
3 is watermarked with a unique one of the  $m$  parts of the  
4 identifier.

1 16. The program product of claim 13, wherein the identifier is  
2 calculated as a hash of the data contained in the plurality of  
3 first sections.

1 17. A program product stored on a recordable media for  
2 verifying a digital recording that, when executed, comprises:  
3 means for reading a plurality of first sections from the  
4 digital recording and calculating a first verification  
5 identifier from data contained in the plurality of first  
6 sections;  
7 means for reading watermarks from each of a plurality of  
8 second sections from the digital recording;  
9 means for determining a second verification identifier from  
10 at least one of the watermarks; and  
11 means for comparing the first verification identifier and  
12 the second verification identifier.

1 18. The program product of claim 17, wherein the second  
2 verification identifier is determined by coalescing a set of m  
3 watermarks read from the digital recording.

1 19. A method for processing a digital recording, the method  
2 comprising:

3 marking the digital recording with the steps of:

4 dividing the digital recording into a plurality of  
5 first sections interleaved with a plurality of second  
6 sections;

7 calculating an identifier as a function of data  
8 contained in each of the plurality of first sections; and

9 watermarking each of the plurality of second sections  
10 with information related to the identifier.

1 20. The method of claim 19, wherein the dividing step  
2 interleaves each of the plurality of first sections in an  
3 alternating manner with each of the plurality of second  
4 sections.

1 21. The method of claim 19, wherein the calculating step splits  
2 the identifier into  $m$  parts such that each of the  $m$  parts  
3 comprises information related to the identifier.

1 22. The method of claim 21, wherein a set of  $m$  second sections  
2 form a group, and each second section within the group is  
3 watermarked with a unique one of the  $m$  parts of the identifier.

1 23. The method of claim 19, wherein the identifier is  
2 calculated as a hash of the data contained in the plurality of  
3 first sections.

1 24. The method of claim 19, further comprising the verification  
2 steps of:

3 reading the plurality of first sections and calculating a  
4 first verification identifier from data contained in the  
5 plurality of first sections;

6 reading at least one watermark from the plurality of second  
7 sections;

8 determining a second verification identifier from the at  
9 least one watermark; and

10 comparing the first verification identifier and the second  
11 verification identifier.

1 25. The method of claim 24, wherein the step of reading the at  
2 least one watermark reads m watermarks from a first group of  
3 second sections, and wherein the step of determining the second  
4 verification identifier coalesces the m watermarks.

1 26. The method of claim 24, comprising the further step of  
2 aborting processing of the digital recording when the first



- 3 verification identifier and the second verification identifier
- 4 are not equal.

1 27. A watermarked digital recording having a plurality of  
2 tracks, comprising:  
3 a plurality of first sections interleaved with a plurality  
4 of second sections, wherein the second sections include  
5 watermark information relating to data contained in the first  
6 sections.

1 28. The watermarked digital recording of claim 27, wherein the  
2 second sections are clustered into groups, and the watermark  
3 information in each group can be coalesced to generate an  
4 identifier that equals a hash of the data contained in the first  
5 sections.